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ABSTRACT

Identifying major trends related to the supply and demand for teachers in Michigan provides the purpose for this study. The data was gathered primarily from the Professional Personnel Register compiled annually by the Teacher Education and Professional Service Division of the Michigan Department of Education. The data provides empirical evidence of the attrition of teaching personnel who have graduated from various institutions. It also provides a basis for estimating the extent to which teachers who leave the public schools return to teaching at a later date. Factors examined which influence the supply and demand of teachers include (1) birth rate and enrollment, (2) newly certified teachers and the increasing number of teachers, and (3) attrition rate. The study also highlights the descriptive characteristics of Michigan teachers and analyzes employment trends by curriculum. (Tables and figures are provided.) (JMF)

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SUMMARY OF MAJOR TRENDS INFLUENCING SUPPLY AND DEMAND FOR TEACHERS IN MICHIGAN

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January, 1976

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The purpose of this paper is to identify major trends related to the supply and demand for teachers in Michigan. It is expected that this information will be helpful to teacher educators and to professional organizations as they seek to make appropriate decisions in preparing teachers for Michigan's schools.

The writer has drawn upon several sources of information as indicated in the list of references at the end of this report. However, the primary source of data has been the Professional Personnel Register which is compiled annually by the Teacher Education and Professional Service Division of the Michigan Department of Education.

The Registers from 1967-1968 through 1974-1975 contain approximately 600,000 individual records. For each individual there are about 22 categories of information such as: social security number, county, local school district, certificate type, training institution, highest degree, majors, minors, K-12 assignments, teaching level, salary, sex, race, years teaching and birthdate.

Since the social security number is a unique identifier, it has been possible to trace the employment of teachers and administrators in public schools from 1967 through 1975. This provides empirical evidence of the attrition of teaching personnel who have graduated from various institutions. It has also provided a modest basis for estimating the extent to which teachers who leave the

public schools of Michigan return to teaching at a later date. Both of these elements, attrition and return of former teachers to active employment in public schools, are important in deliberations over supply and demand for teaching personnel in Michigan.

It should be noted that this report deals only with professional personnel employed in public elementary and secondary schools. Moreover, information about professional personnel employed in Michigan public schools during 1971-1972 is not included in this study because the data were not collected by the Michigan Department of Education.

Birth Rate & Enrollment:

Figure 1 illustrates the pattern of actual births in Michigan from 1930 through 1974, and it also illustrates the number of new births projected for Michigan until 1985. The actual births are based upon the records of the Michigan Department of Health and the projected births were made by the Department of Management and Budget (12).

It is clear that the upward trend in births that started during the early 1940's reached a peak in Michigan about 1957 and began to decline until 1969 when there was another upward increase in births which lasted briefly until 1970. Then, the downward trend resumed and it has continued in this manner through 1974. The upward trend in projected births is expected to start during 1976 and continue through 1985. This increasing number of births is based upon the number of females who were born during the "Baby Boom" of the 1950's and they are entering the high fertility period of 25 to 35 years

of age. Many of these women have postponed having children and their time for bearing children is ending.

However, this increase in number of births will not influence enrollment during the next five years. The children who will be entering the Michigan Public Schools during that time have already been born and are living in the homes of Michigan families. Table 1 illustrates the trend in enrollment which has occurred in Michigan Public Schools from 1966-1967 through 1974-1975. It is clear that there was a 1% to 2% increase in the number of pupils enrolled each year from 1967 until the 1972-1973 school year, when there was a 1% decrease in enrollment which was repeated during each of the next 2 years. Professor Hecker has estimated that the decline in enrollment of 2% to 4% will probably continue until 1980 (3).

If one considers the enrollment and registration of undergraduate students in the College of Education of Wayne State University there was a similar increase which started in 1965-1966 and continued until a peak enrollment of about 2500 students in 1968-1969 (13). Thereafter, there was a gradual and then sharp decline in the number of new students admitted to the undergraduate program in the College of Education. This is illustrated in Figure 2 and the curve does not appear to have reached a plateau at the end of the 1974-1975 school year, when the total number of students who were admitted and registered was about 950 or 37% of the peak reached in 1968-1969.

Similar decreases in enrollment have been reported informally by other departments and Colleges of Education in Michigan.

However, authoritative information about admissions of new students is not readily available from other Michigan institutions.

Newly Certified Teachers:

However, the decrease in enrollment inevitably shows up in the number of newly certified personnel. Figure 3 illustrates number of new provisional certificates issued by the Michigan Department of Education from 1968 through 1974 and it includes the projected number of certificates expected to be issued each year until 1979 (1). There was a peak period in 1969-1970 when about 23,000 new certificates were issued. This is somewhat deceptive because there was a change in the certification procedures during this time and a more realistic estimate of 19,000 new certificates issued in 1969-70 would be reasonably accurate. At any rate, it is apparent that there has been a continuing decline in new certificates issued until the low of 13,000 issued in 1973-1974.

Projections of future numbers of provisional certificates have been secured by the Michigan Department of Education from each teacher training institution in Michigan. The projections shown in Figure 3 are based upon these estimates and reflect a plateau of about 11,000 new teachers to be certified each year until 1979. However, these estimates may be unduly optimistic if the undergraduate enrollment continues to decline as it has during the past 3 or 4 years.

Increasing Number of Teachers:

In contrast, it is interesting to observe that the total number

of teachers employed in Michigan Public Schools has increased each year and this trend has continued into 1975. Figure 4 illustrates the pattern of growth which started in the 1950's and has continued until 1974-1975 when the total number of teachers increased 1.8% over the previous year and reached the 101,000 mark. It is important to recognize that total number of teachers employed in Michigan was increasing at the same time that total enrollment in Michigan's schools was decreasing 1% to 3% each year.

Part of the explanation for this anomalie is that the Michigan Legislature passed laws which created new educational programs and they authorized money to support the new programs. For example, the Mandatory Special Education law required schools to provide an educational program for handicapped children from birth through age 25 and additional money was authorized to employ special education personnel to support the new program.

Another contributing factor which made it possible for the total teacher supply to increase at this time was that the state equalized evaluation continued to increase and provide the tax revenue to support new programs. This increase in state equalized evaluation is illustrated in Figure 5. The corresponding increase in support for the public schools is illustrated in Figure 6, which shows the sharp increases in aid from local sources and from the state which enabled schools to meet negotiated salary increases and still employ more teachers to staff the newly legislated programs (14).

Descriptive Characteristics of Michigan Teachers:

An earlier study of the location of teachers indicated that

certain teacher training institutions served specific regions in the State (17). Table 2 illustrates the proportion of teachers and administrators who were trained at various institutions and who were employed in the tri-county area of Macomb, Oakland or Wayne Counties during 1974-75. It is apparent that the great majority (93%) of Wayne's graduates who are employed in Michigan Public Schools are serving the tri-county area, while only 7% are employed in school districts elsewhere in Michigan. Other institutions such as Eastern Michigan University and the University of Michigan have 59% and 49% respectively of their graduates who are employed in Michigan Public Schools teaching in the tri-county area. On the other hand, institutions such as Western Michigan University and Central Michigan University have placed less than 30% of their graduates in this area and serve the educational needs of other parts of the State. A substantial number of the graduates from out-of-state institutions who are employed in Michigan Public Schools are also employed in the tri-county area.

Table 3 provides descriptive information about Michigan teachers employed during the 1974-1975 school year according to the institution which recommended them for certification. The largest number of teachers from a single institution came from Western Michigan University, which also had the largest number of newly employed first year teachers in 1974-75. The University of Michigan and Wayne State had the fewest new teachers employed in the public schools that year.

Average salary for teachers was highest for graduates of Wayne State, followed by teachers from out-of-state, University of Michigan

and Eastern Michigan. However, it is evident that 50% or more of these teachers are employed in the tri-county area where salary levels are higher than in other parts of Michigan.

Wayne State has several times as many Blacks who have studied at Wayne and entered the Michigan Public Schools as teachers. About 20% of Wayne's graduates are Black while Western Michigan University has less than 4% of its graduates who are Black and teaching in the public schools.

Newly Employed Teachers:

Figure 7 compares the number of teachers in Michigan who were newly employed each year from 1968-69 through 1974-1975. The curve marked "A" shows the number of newly employed teachers who had not taught previously. The number of these beginning teachers has declined from the high point of 9,000 employed in 1968-69 to the low point of 5,400 employed in 1974-75.

The "B" curve in Figure 7 shows the total number of newly employed teachers in Michigan and the area between curve "A" and curve "B" is the number of experienced teachers who were newly employed each year. The number of experienced teachers employed has declined from a high point of about 11,000 in 1968-69 to a low point of about 5,500 experienced teachers re-employed in 1974-75. It is apparent that in 1974-1975 the number of teachers hired was evenly divided between inexperienced and experienced teachers. These data do not support the view of some educators who felt that school districts would hire

inexperienced teachers at low salaries in preference to employing experienced teachers who could command higher salaries because of their previous teaching experience.

Figure 8 compares the number of newly employed teachers in the tri-county area according to whether they were beginning or experienced teachers. The figure indicates that in the tri-county area there was a slight tendency to employ more experienced teachers as opposed to inexperienced teachers.

Some persons have speculated that the number of newly employed teachers graduating from institutions outside Michigan has flooded the teacher market, while graduates of Michigan teacher training institutions have been unable to find work. Figure 9 indicates that the number of newly employed teachers who graduated from institutions outside Michigan has been declining rapidly since 1968-69. In 1968-69 there were 5,400 new teachers who were employed in Michigan Public Schools and had been trained at institutions outside of Michigan. This number has declined each year until 1974-75, when there were about 1600 newly employed teachers in Michigan Public Schools who had been trained outside Michigan.

Employment Trends by Curriculum:

It is clear that employment opportunities in certain curriculum areas have diminished sharply during the past 3 to 5 years. An earlier report has documented the employment patterns in several curriculum area and therefore only two examples will be cited here(9). Figure 10 illustrates the employment trend for elementary school

teachers with two graphs. The graph on the left indicates the total number of elementary school teachers employed in Michigan Public Schools from 1967-68 through 1974-75. It is clear that there was a loss of teaching positions starting in 1973-74 and continuing into 1974-75 and probably into 1975-76. The graph on the right indicates the number of newly employed elementary school teachers in Michigan as well as the number of elementary teachers newly employed in the tri-county area. It is also evident that there has been a sharp decline in the employment of beginning teachers in this curriculum area. The decrease appears to be reaching a plateau in the tri-county area, but the curve for all Michigan suggests a further decline in employment in public schools outside the tri-county area. Similar curves have been plotted to show trends in employment of teachers in English, social studies and other curriculum areas.

In special education there has been an upward trend in employment throughout Michigan as indicated in the graph on the left in Figure 11. There was a plateau during the period from 1970 through 1972, but the upward trend emerged with the passage and funding of the Mandatory Special Education bill.

The graph on the right side of Figure 11 indicates a very sharp increase in the employment of new teachers throughout Michigan from 1969-70 through 1974-75. On the other hand, the employment of new special education teachers in the tri-county area showed slight increases until 1973-74, when the curve began to move upward sharply.

However, a comparison of the data point for 1974-75 employment in the tri-county area and the data point indicating employment in other parts of Michigan reveals twice as many job opportunities for special education teachers outside the tri-county area. However, it should be recalled that the field of "special education" is composed of several specialities, some of which may be saturated with applicants or there may be many unfilled positions waiting for qualified professionals in other specialities. Trends in employment of Special Education Personnel in Michigan have been summarized by the writer in an earlier report (10).

Employment opportunities for newly certified teachers have been summarized by Dr. Chester McCormick, Office of Teacher Placement (4). Table 4 indicates the need for new teachers in various curriculum areas during the 1974-1975 school year. It is important to recognize that the employment of new teachers in Michigan Public Schools represents only a part of the employment picture for graduates of the College of Education. In another report, Dr. McCormick identified almost 400 additional graduates of the College of Education who were employed in a single year in teaching positions in private schools as well as in schools outside of Michigan. He estimates that approximately 84% of the new teachers seeking employment during 1974-75 were able to get teaching positions.

Attrition:

The opportunities for employment in Michigan Public Schools depend to some extent upon the number of teachers who leave teaching

for various reasons, e.g., retirement, homemaking, graduate study, career changes. Annual attrition refers to the number of teachers who were employed in the Michigan Public Schools as indicated by the annual Professional Personnel Register and were not present in the Register the following year. Figure 12 indicates the annual attrition of teachers in Michigan from 1967-68 through 1973-74. It is apparent that there has been a decrease in the number of teachers leaving the Michigan Public Schools. The highest rate of attrition occurred in 1968-69 when 15% of the teachers in Michigan Public Schools did not return to teaching in the fall of 1969. This rate of attrition has decreased until 1973-74, when about 9% of the teachers failed to return to classroom in the fall of 1974. It seems reasonable to infer that as teaching jobs became more difficult to acquire teachers became increasingly reluctant to leave teaching.

One must be careful in considering an annual rate of attrition because that rate can vary from one teaching field to the next and the meaning of the per cent change can be deceptive. For example, Figure 13 shows the annual attrition of elementary school teachers in Michigan. There is a decrease in attrition from the high point of 17% in 1968-69 to the lower rate of 11% attrition in 1972. The numbers at the top of Figure 13 indicate the actual numbers of teachers who left teaching each year. It is apparent that about 500 elementary school teachers left teaching each year, which correspond to an annual decrease in attrition of 1.5%.

On the other hand, Figure 14 shows the annual attrition of industrial arts teachers in Michigan. There is a decrease in annual

attrition from the high of 11% in 1963 to the low of 7% in 1972, which represents about a 4% decrease in 4 years. However, the numbers at the top of Figure 14 indicate that about the same number of teachers departed each year. Obviously, the decrease in per cent attrition has been caused by an increasing number of industrial arts teachers employed in Michigan, but it is also important to recognize the hazard of depending entirely upon the rate of attrition as an indicator of the loss of teaching personnel in Michigan.

Projecting Teacher Supply/Demand:

Projections of the number of new teachers needed for various curriculum areas in Michigan Public Schools have been made by the Michigan Education Association (11) and by Dr. Patrick Sheetz at Michigan State University (5). Since the decisions to accept or reject teacher applicants will have a substantial influence upon the lives of students who aspire to enter teaching, these projections are very important. It is also necessary to be very cautious in basing decisions upon these projections.

The writer has been very critical of the methods used by the Michigan Education Association in making its projections. The MEA forecast of teacher needs for 1973-74 was made in 1972, which was only one year ahead. Page 68 of the MEA report indicates the number of newly certified teachers needed by the Michigan Public Schools in the school year 1973-1974. Table 5 lists the curriculum areas and the number of beginning teachers which the MEA forecast as necessary for Michigan schools in 1973-74. The third column lists the actual

number of newly certified teachers who were employed in the Michigan Public Schools that year, and the last column indicates the percent difference between the MEA projection and the actual number of newly certified teachers required in Michigan Public Schools. It is apparent that the great variation between the projection and the actual need for teachers does not lend credibility to the projections.

It is important to recognize that during the last 2 years the MEA has established a series of quotas for its members to use in deciding to accept or refuse student teachers. In this manner, the MEA hopes to limit the number of newly certified teachers to conform to its projected numbers of new teachers needed in various curriculum areas.

In the projections made by Sheetz, it appears that he has used Michigan Department of Education reports which count a single teacher twice if that teacher has two assignments for a given school year. Therefore, an elementary teacher would be counted once since that teacher has only one assignment, while a secondary level teacher could be counted twice, once for teaching mathematics as one assignment and once for teaching general science as a second assignment. The hazards in basing decisions upon these data are obvious.

The writer agrees with the importance of making projections, but he urges an end to further restrictions to exclude applicants for teaching until precise studies have been completed and verified as to their levels of precision. It is important to give students adequate information about their job prospects at this time for

teaching in a field that interests them. However, the projections of future needs for teachers are not sufficiently precise to say absolutely that student "X" may not enter the teacher education program. In the writer's judgement, it would be irresponsible counseling to take such an absolute stand in view of the present data.

It is the writer's position that there is an underutilization of the existing supply of trained teaching personnel in Michigan. There are critical learning problems faced by children in school districts such as Detroit. These problems can be reduced in severity by a judicious use of available human and material resources.

It seems apparent that Michigan has the personnel and the resources to provide a quality program of education for its children and youth. This could be a good opportunity to attempt to correct the minimal literacy which was cultivated during the 1960's when crowded classes of 40 or more pupils were commonplace.

It would also be a judicious move to avoid crowding children into classes of 30 or more, when their home environment is permeated with the worry and frustration of high unemployment, uncertain welfare benefits, a missing father, and many people packed into inadequate housing. Smaller classes won't guarantee a spurt in achievement scores, but smaller classes do create conditions which permit the teacher to behave humanely in working with children.

The passage of the Mandatory Special Education Act indicated what could be accomplished when parents and professional educators

combined their efforts in a just cause. It is clear that a quality program of education for all children and youth in Michigan is a just cause. It is not clear that we have the same commitment of parents and professional educators to the task of championing that cause.

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(5) L. Patrick Sheetz, "Projected Supply and Demand for Teachers Through 1986 in Michigan Public Schools," Michigan State University, East Lansing, Michigan, November, 1974.

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(12) "A Look at Teacher Supply and Demand in Michigan," Michigan Education Association, East Lansing, Michigan, Februsry 1973.

(13) "Population Projections for the Counties of Michigan," Department of Management and Budget, Lansing, Michigan, October, 1974.

(14) Howard Reilly, Dee Stevens, Virginia Gay, Division of Academic Services, College of Education, Wayne State University.

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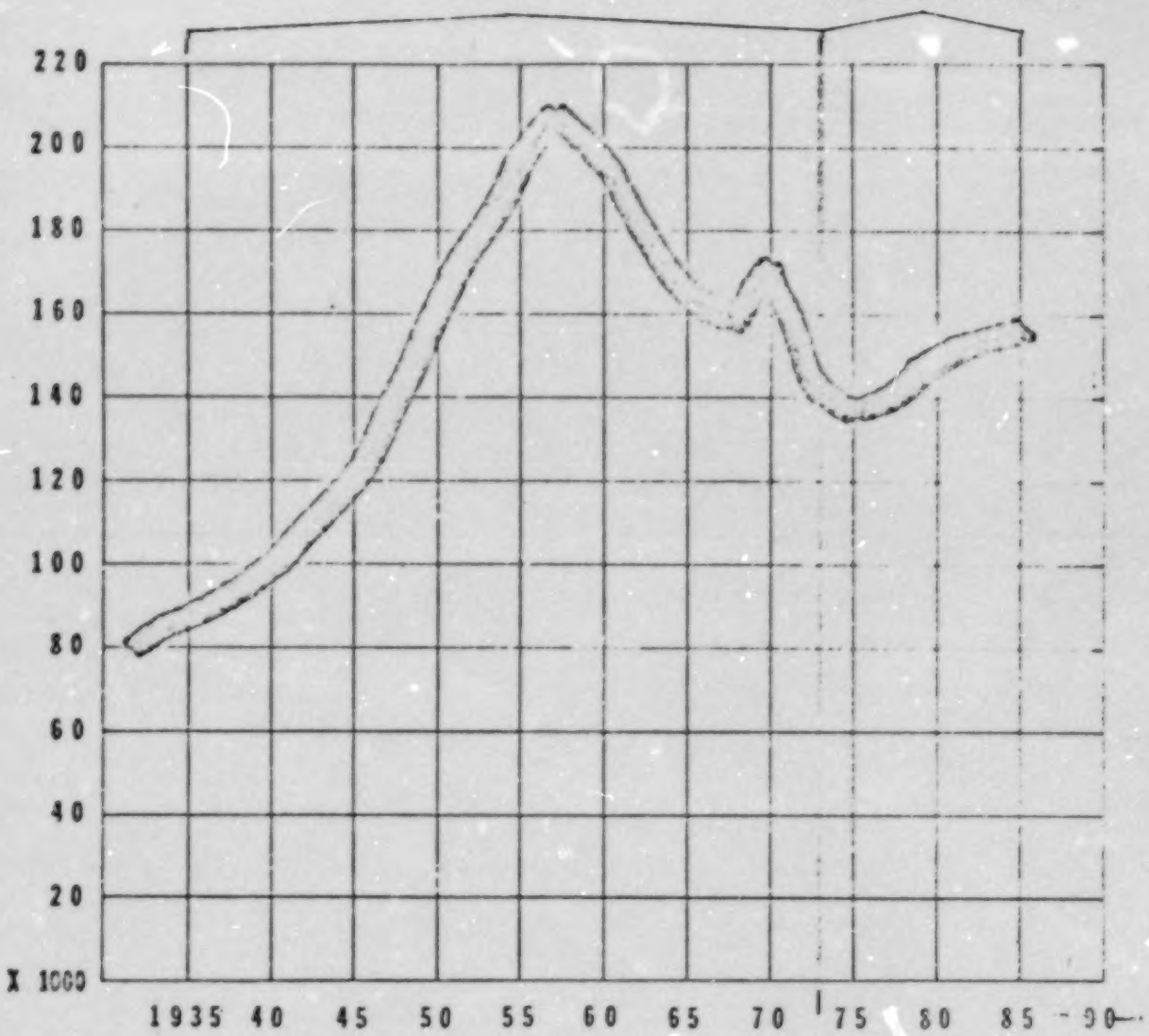
FIGURE 1



ACTUAL AND PROJECTED BIRTH IN MICHIGAN

TABLE 1

COMPARISON OF PUPIL ENROLLMENT

School Year	Total Enrollment Public Schools	Percent Change
1966-67	2,034,000	
1967-68	2,080,000	2.3
1968-69	2,123,000	2.1
1969-70	2,164,000	1.9
1970-71	2,179,000	1.0
1971-72	2,213,000	1.6
1972-73	2,193,000	-1.0
1973-74	2,159,000	-1.6
1974-75	2,138,000	-1.1
*1975-76	2,110,000	-1.2
*1976-77	2,069,000	-1.9
*1977-78	2,016,000	-2.6
*1978-79	1,941,000	-3.7

*Projections based upon Stanley Hecker, "Actual and Projected Pupil Population", Michigan State University, East Lansing, August, 1974.

FIGURE 2 UNDERGRADUATE ENROLLMENT IN COLLEGE OF EDUCATION

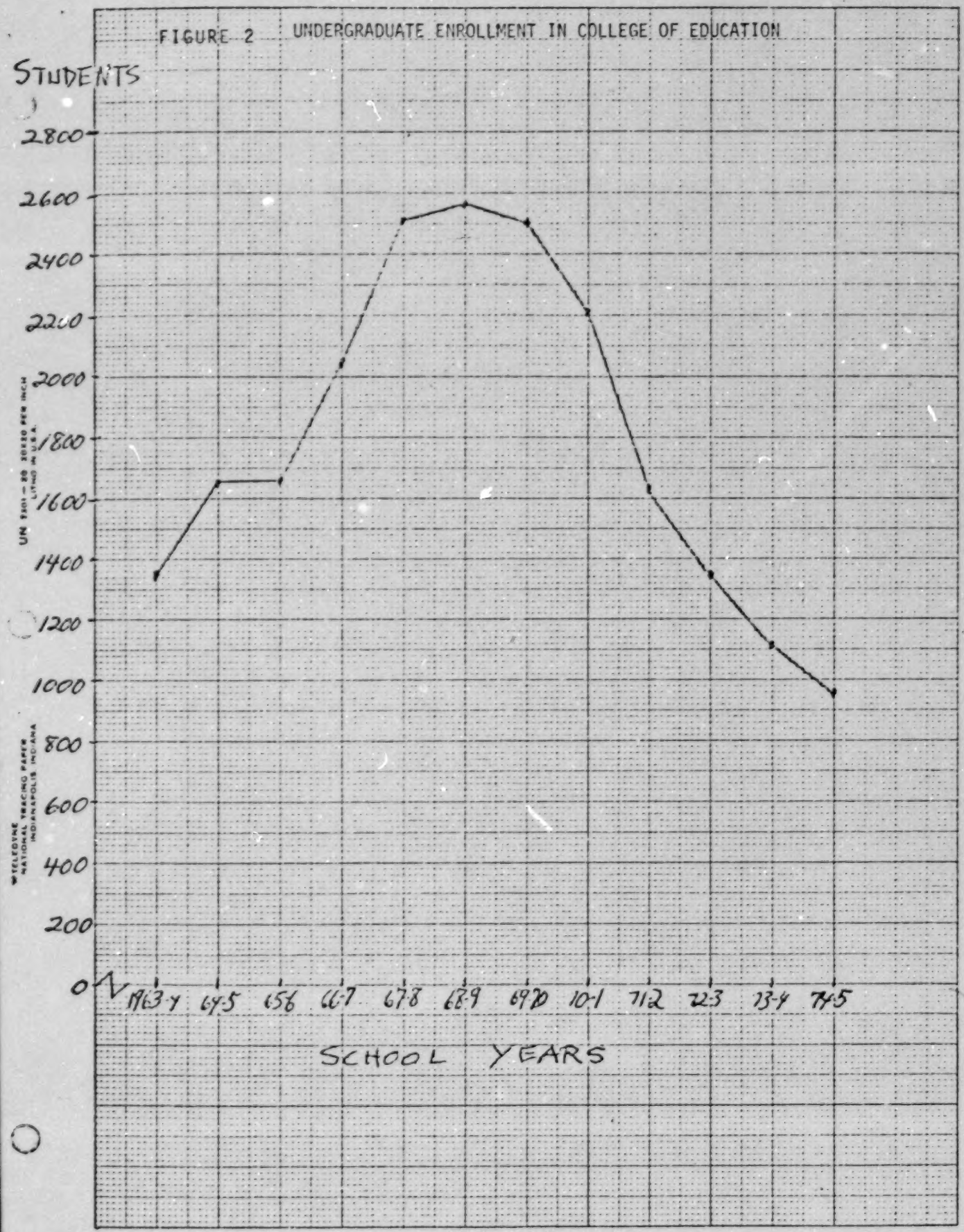
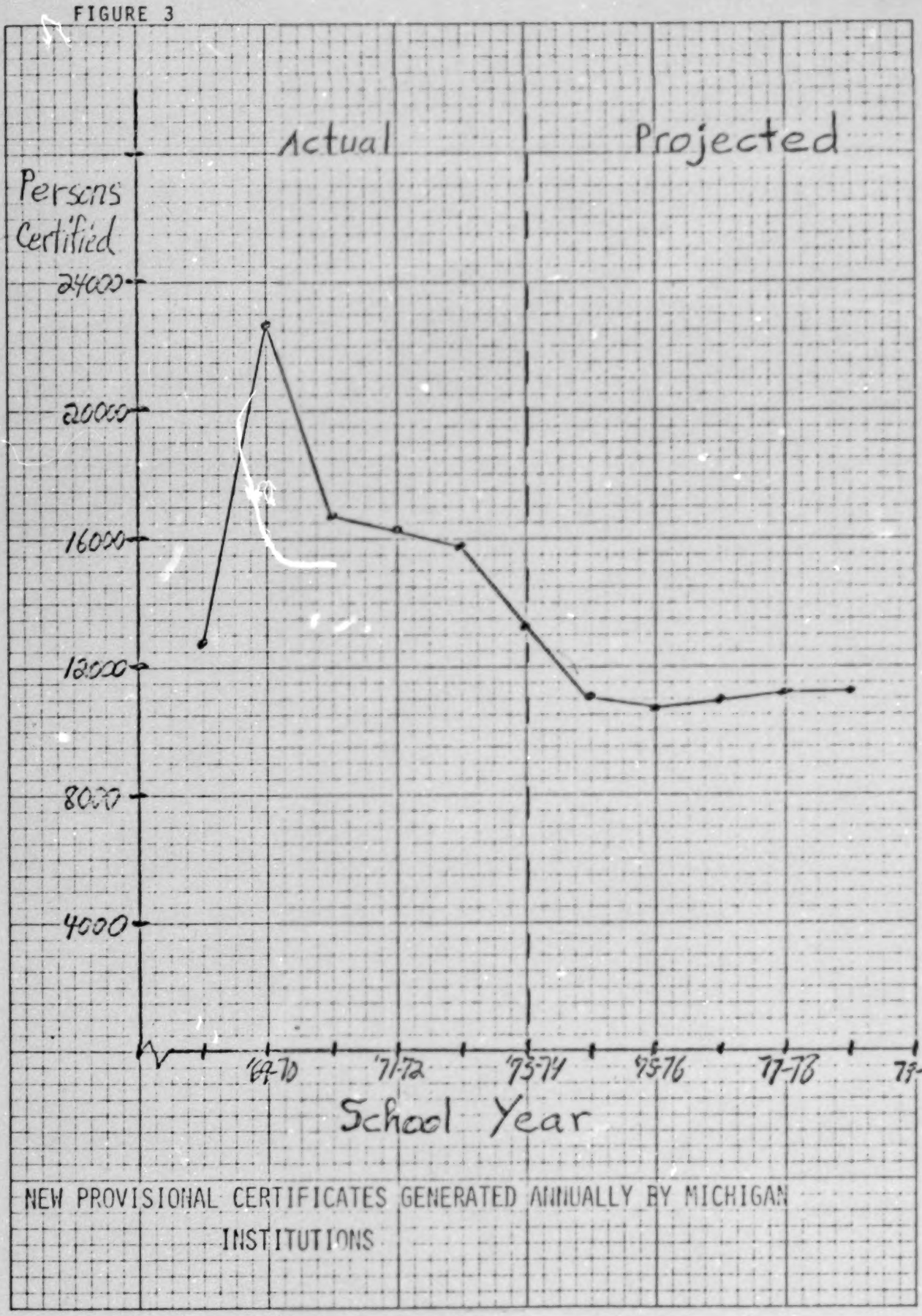
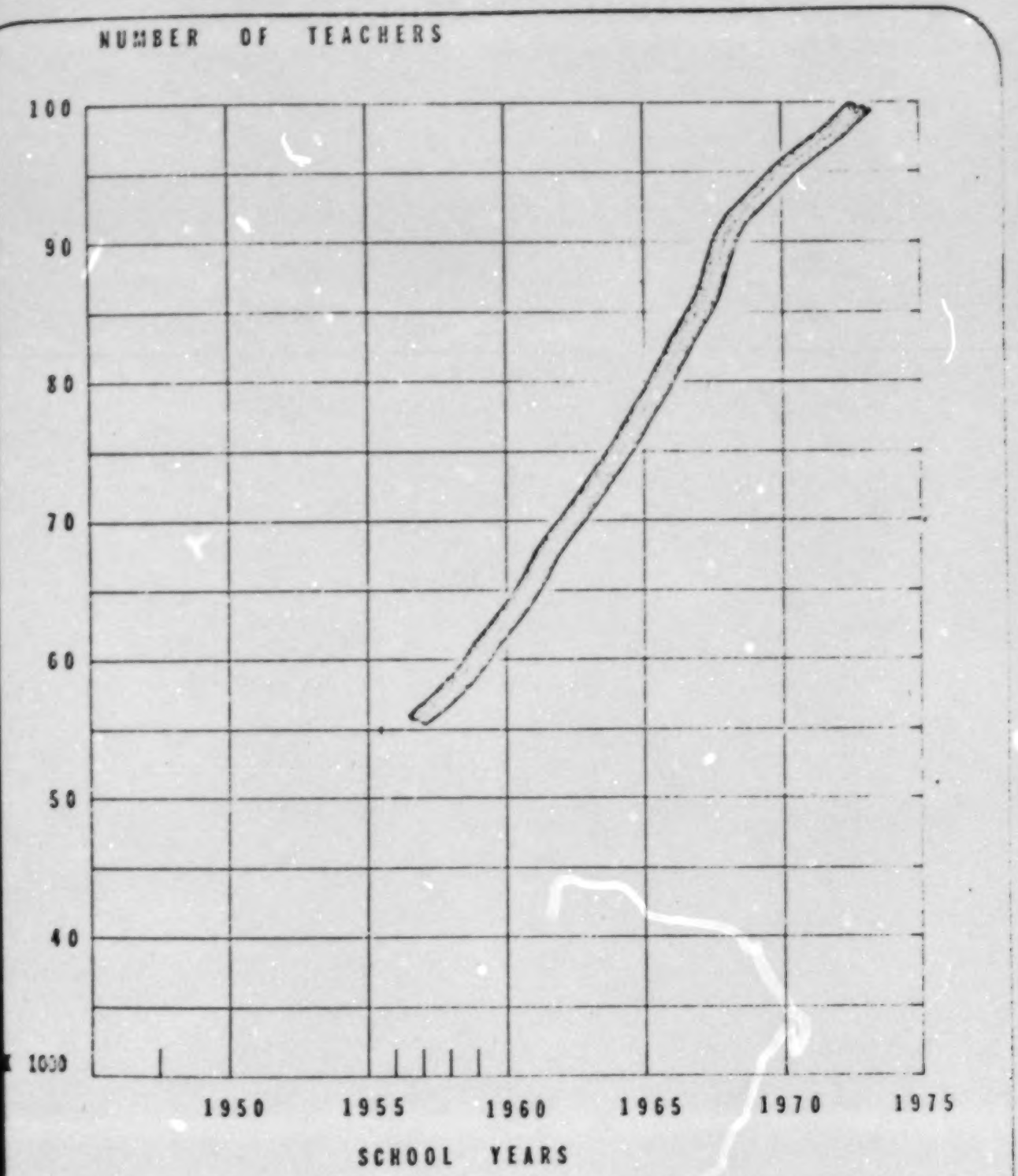


FIGURE 3



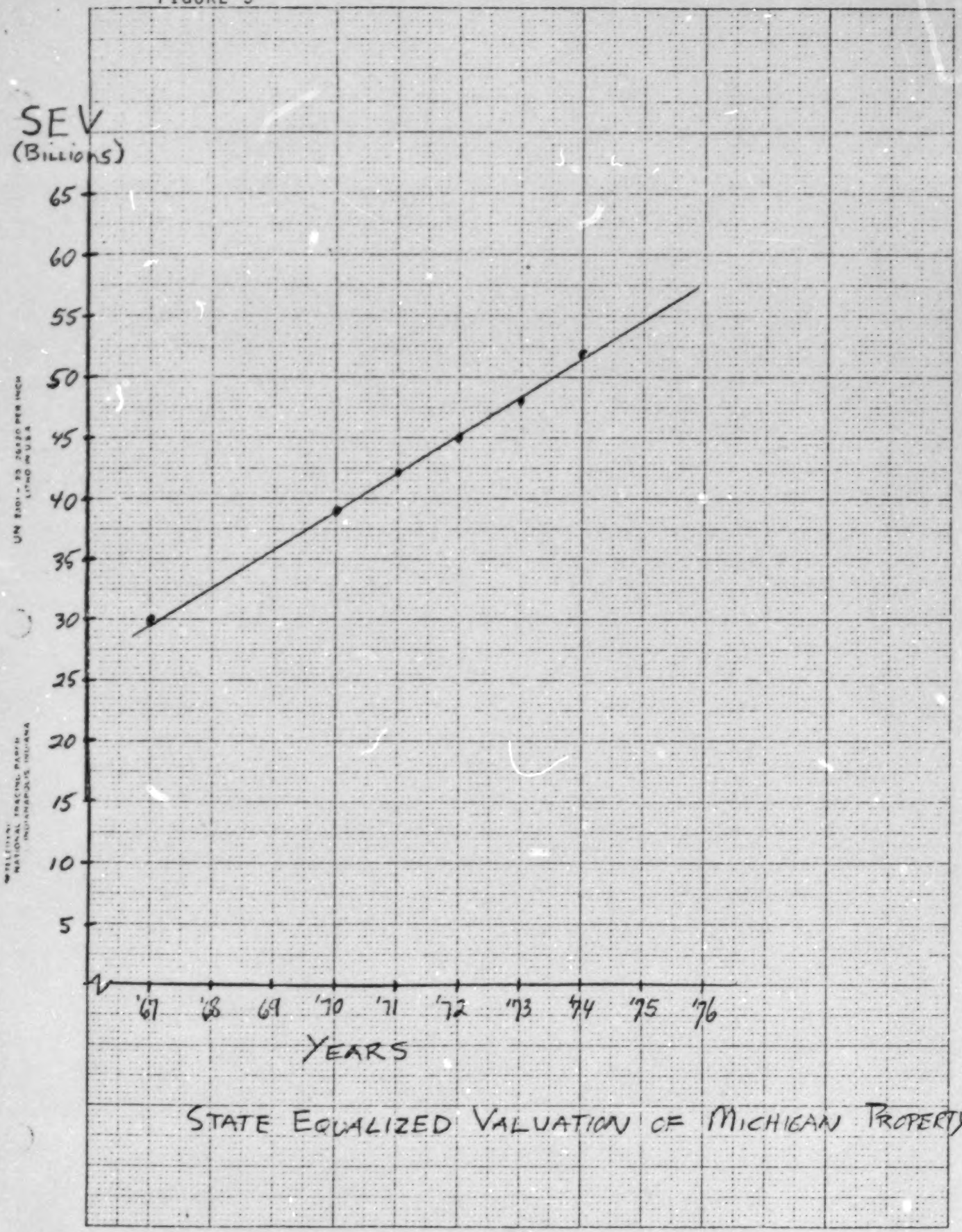
NEW PROVISIONAL CERTIFICATES GENERATED ANNUALLY BY MICHIGAN INSTITUTIONS

FIGURE 4

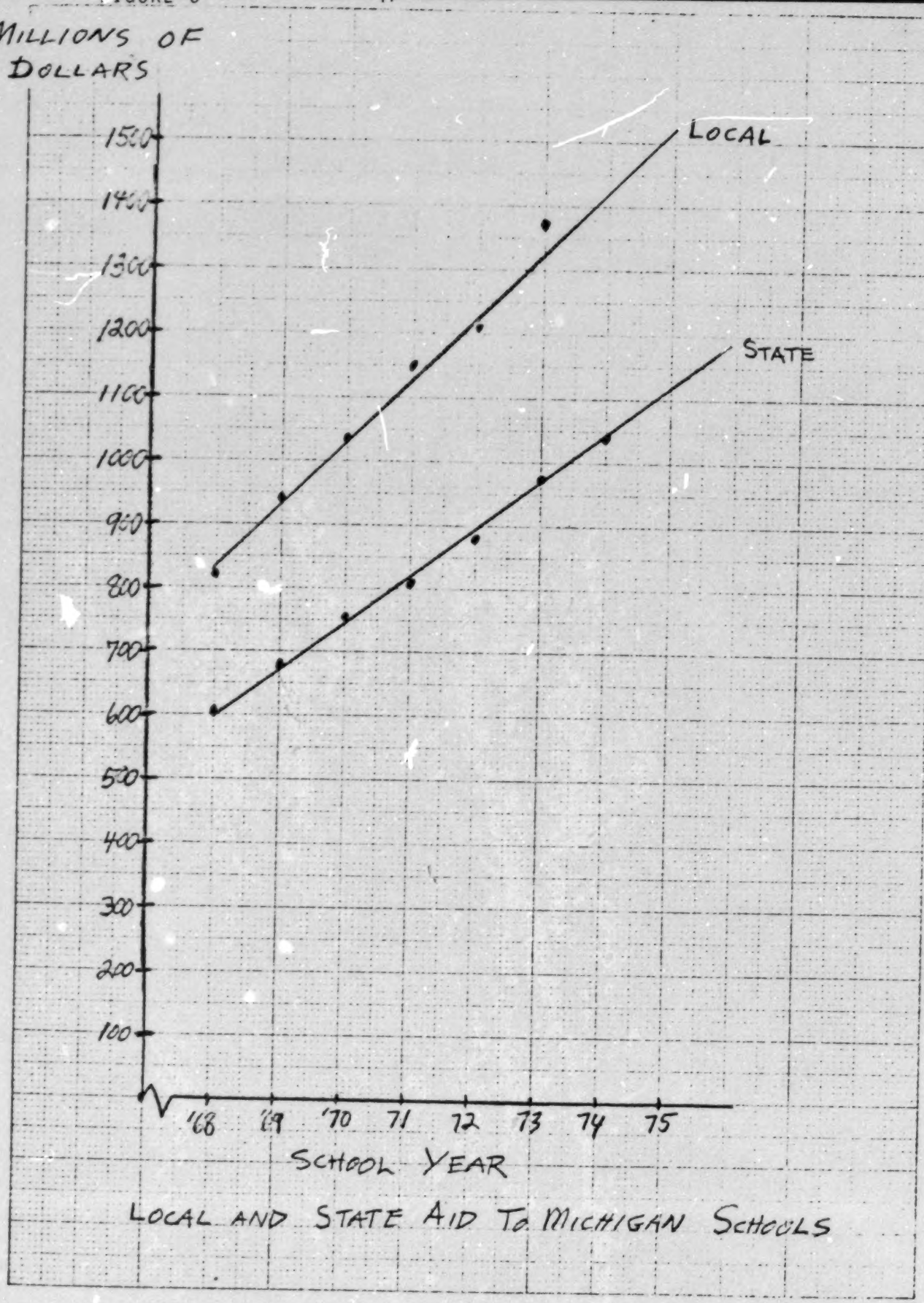


TOTAL NUMBER OF TEACHERS EMPLOYED
IN MICHIGAN PUBLIC SCHOOLS (1957-1973)

FIGURE 5



STATE EQUALIZED VALUATION OF MICHIGAN PROPERTY



LOCAL AND STATE AID TO MICHIGAN SCHOOLS

TABLE 2

COMPARISON OF INSTITUTIONS TRAINING TEACHERS AND ADMINISTRATORS WHO ARE EMPLOYED IN PUBLIC SCHOOLS OF TRI-COUNTY AREA (1974-75)

COUNTY	UM	MSU	WSU	WMU	EMU	CMU	OUT-OF-STATE
MACOMB	.04	.07	.16	.04	.09	.05	.07
OAKLAND	.12	.11	.18	.06	.12	.07	.12
WAYNE	.32	.10	.59	.07	.38	.05	.24
TRI-COUNTY	.49	.28	.93	.17	.59	.17	.43
MICHIGAN	7231	13974	14173	14081	11736	12502	18597

TABLE 3

COMPARISON OF CERTIFIED CLASSROOM TEACHERS IN MICHIGAN SCHOOLS (1973-74) WHO RECEIVED THEIR INITIAL PROFESSIONAL PREPARATION AT UNIVERSITY OF MICHIGAN, MICHIGAN STATE, WAYNE STATE, WESTERN MICHIGAN, EASTERN MICHIGAN, CENTRAL MICHIGAN, NORTHERN MICHIGAN OR OUT OF STATE

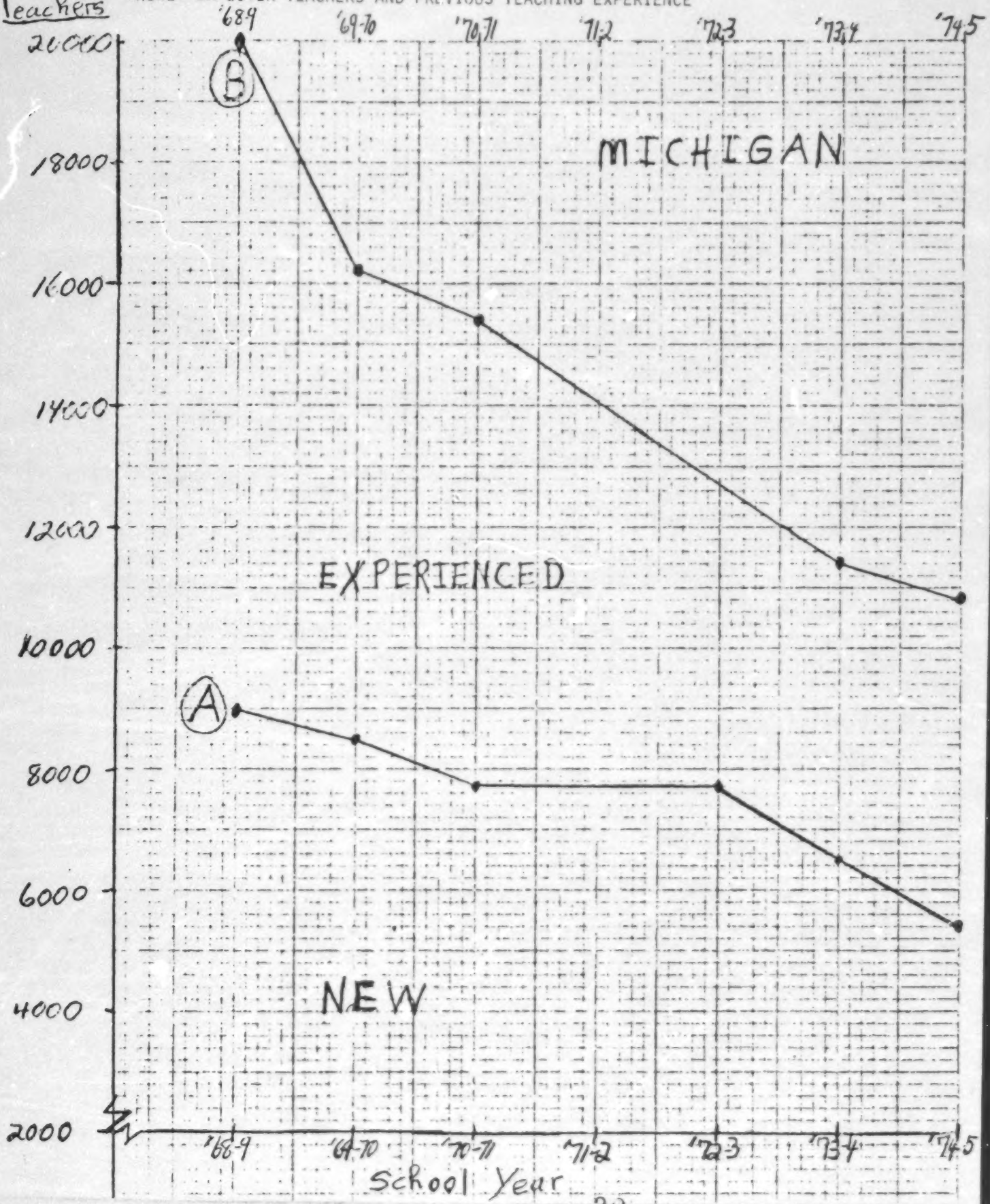
	UM		MSU		WSU		WMU		EMU	
Number of Teachers	6400.	(1%).	12735.	(3%).	12659.	(1%).	12847.	(2%).	10480.	(0%)
Number of New Teachers	439.	(4%).	1100.	(-3%)	466.	(-20%).	983.	(-7%)	716.	(-10%)
Degrees										
Bachelors	2970.	(-3%)	8548.	(1%).	6658.	(-4%)	8864.	(0%).	6143.	(-3%)
Masters.	3309.	(6%).	3996.	(10%)	5738.	(8%).	3898.	(9%).	4171.	(5%)
Doctorate	39.	(-26%).	28.	(-40%).	49.	(20%)	12.	(-33%.	10.	(-68%)
Specialist.	58.	(18%)	55.	(8%).	166.	(11%)	32.	(7%).	135.	(12%)
No Degree	24.	(-17%).	108.	(-26%).	48.	(-38%).	41.	(-41%'	21.	(47%)
Mean Salary	13382.	(5%).	12087.	(6)	13702.	(3%).	11867.	(5%).	13084.	(5%)
Race										
Caucasian	5885.	(0%).	12330.	(3%).	10225.	(0%).	12446.	(2%).	9931.	(-1%)
Black	478.	(13%)	348.	(14%)	2353.	(7%).	360.	(12%)	511.	(8%)
(Indian, Oriental, Spanish American).	37.	(28%)	47.	(7%).	81.	(11%)	43.	(26%)	38.	(27%)
Experience										
Mean (years)	10.0.		7.4.		11.9.		8.9.		9.8	
Range (years)	0-46.		0-44.		0-49.		0-49.		0-49	
Teaching Level										
All Grades	665.	(14%).	559.	(11%)	1604.	(7%).	474.	(5%)	444.	(14%)
Elem. (-6, K-8)	2693.	(-1%).	5994.	(2%).	6737.	(-3%)	6152.	(0%)	5567.	(-4%)
Jr. High	1132.	(0%)	2497.	(3%).	1620.	(5%).	2331.	(4)	1910.	(1%)
Senior High	1722.	(-1%).	3243.	(3%).	2474.	(1%).	3420.	(5%)	2338.	(5%)
Jr./Snr. High	127.	(-7%).	380.	(-9%)	81.	(1%).	438.	(-5%).	195.	(2%)

TABLE 3 (Cont.)

COMPARISON OF CERTIFIED CLASSROOM TEACHERS IN MICHIGAN SCHOOLS (1973-74) WHO RECEIVED THEIR INITIAL PROFESSIONAL PREPARATION AT UNIVERSITY OF MICHIGAN, MICHIGAN STATE, WAYNE STATE, WESTERN MICHIGAN, EASTERN MICHIGAN, CENTRAL MICHIGAN, NORTHERN MICHIGAN, OTHER MICHIGAN INSTITUTIONS, AND OUT OF STATE

	CMU		NMU		Other Mich. Inst.		Out of State	
Number of Teachers	11211.	(4%)	3779.	(3%)	11574.	(5%)	17483.	(-1%)
Number of New Teachers	1138.	(12%)	294.	(-4%)	990.	(0%)	590.	(-5%)
Degrees								
Bachelors	8315.	(2%)	2627.	(2%)	7788.	(2%)	10466.	(-7%)
Masters	2790.	(12%)	1126.	(7%)	3371.	(11%)	6769.	(4%)
Doctorate	6.	(-75%)	2.	(-67%)	14.	(-33%)	67.	(-45%)
Specialist	27.	(0%)	18.	(6%)	51.	(16%)	143.	(13%)
No Degree	73.	(-16%)	6.	(-67%)	350.	(31%)	38.	(-10%)
Mean Salary	11823.	(5%)	11737.	(5%)	12165.	(4%)	13372.	(6%)
Race								
Caucasian	11093.	(4%)	3749.	(2%)	11100.	(5%)	13597.	(-2%)
Black	88.	(26%)	22.	(10%)	397.	(14%)	3693.	(1%)
(Indian, Oriental, Spanish American)	30.	(11%)	8.	(33%)	77.	(26%)	203.	(12%)
Experience								
Mean (years)	8.8.		8.8.		8.		10.7.	
Range (years)	0-47.		0-49.		0-50.		0-46.	
Teaching Level								
All Grades	326.	(16%)	142.	(-4%)	452.	(9%)	967.	(3%)
Elem. (K-6, K-8)	5102.	(1%)	1514.	(0%)	5544.	(4%)	8354.	(-2%)
Jr. High	2094.	(7%)	671.	(8%)	1984.	(4%)	3244.	(-1%)
Senior High	3201.	(6%)	1110.	(4%)	3207.	(9%)	4380.	(-3%)
Jr./Snr. High	455.	(-4%)	336.	(0%)	387.	(2%)	410.	(-1%)

FIGURE 7 NEWLY EMPLOYER TEACHERS AND PREVIOUS TEACHING EXPERIENCE



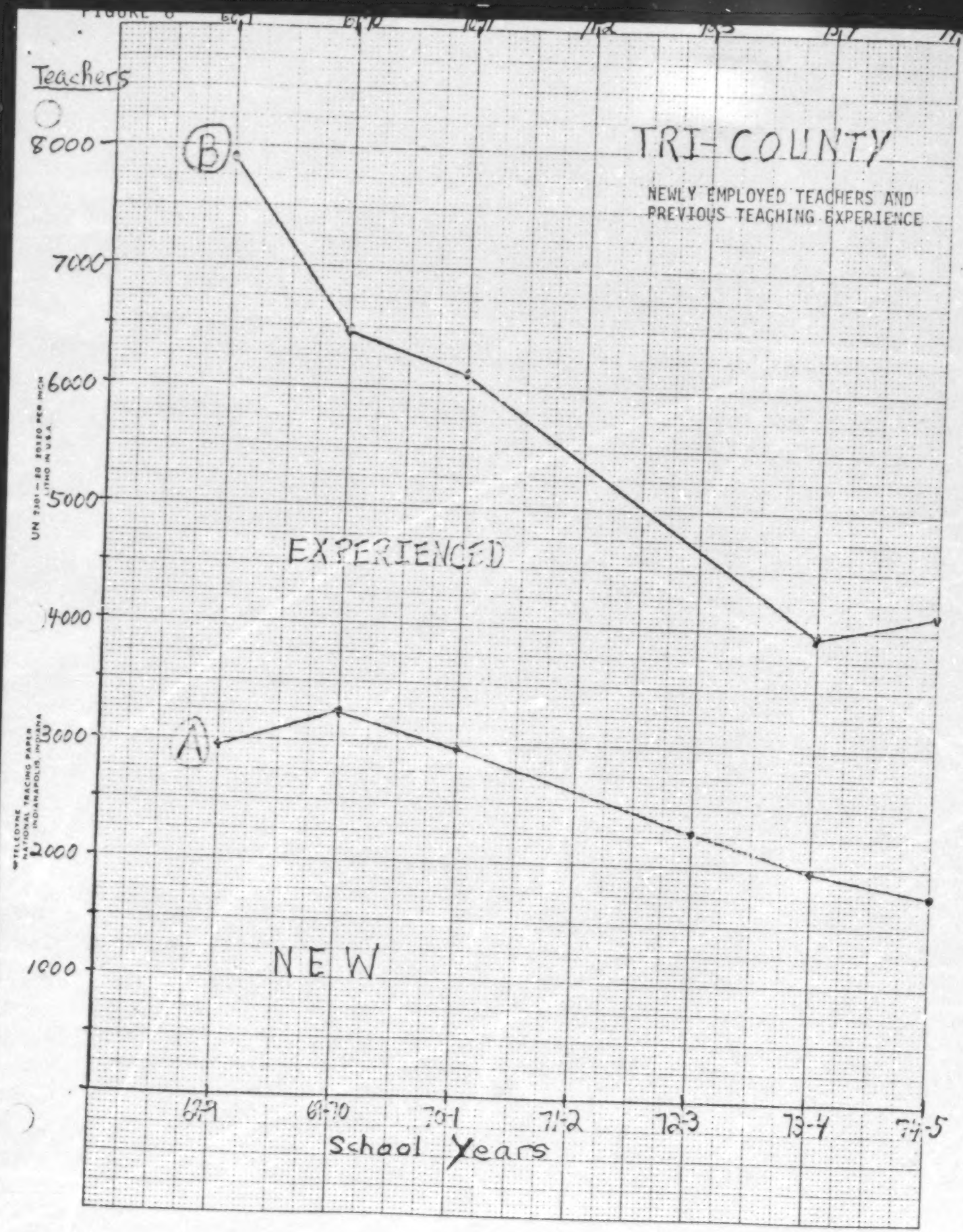

Teachers
8000
7000
6000
5000
4000
3000
2000
1000
TRI-COUNTY
NEWLY EMPLOYED TEACHERS AND
PREVIOUS TEACHING EXPERIENCE
B
A
EXPERIENCED
NEW
59-60
60-61
61-62
62-63
63-64
64-65
School Years

FIGURE 9

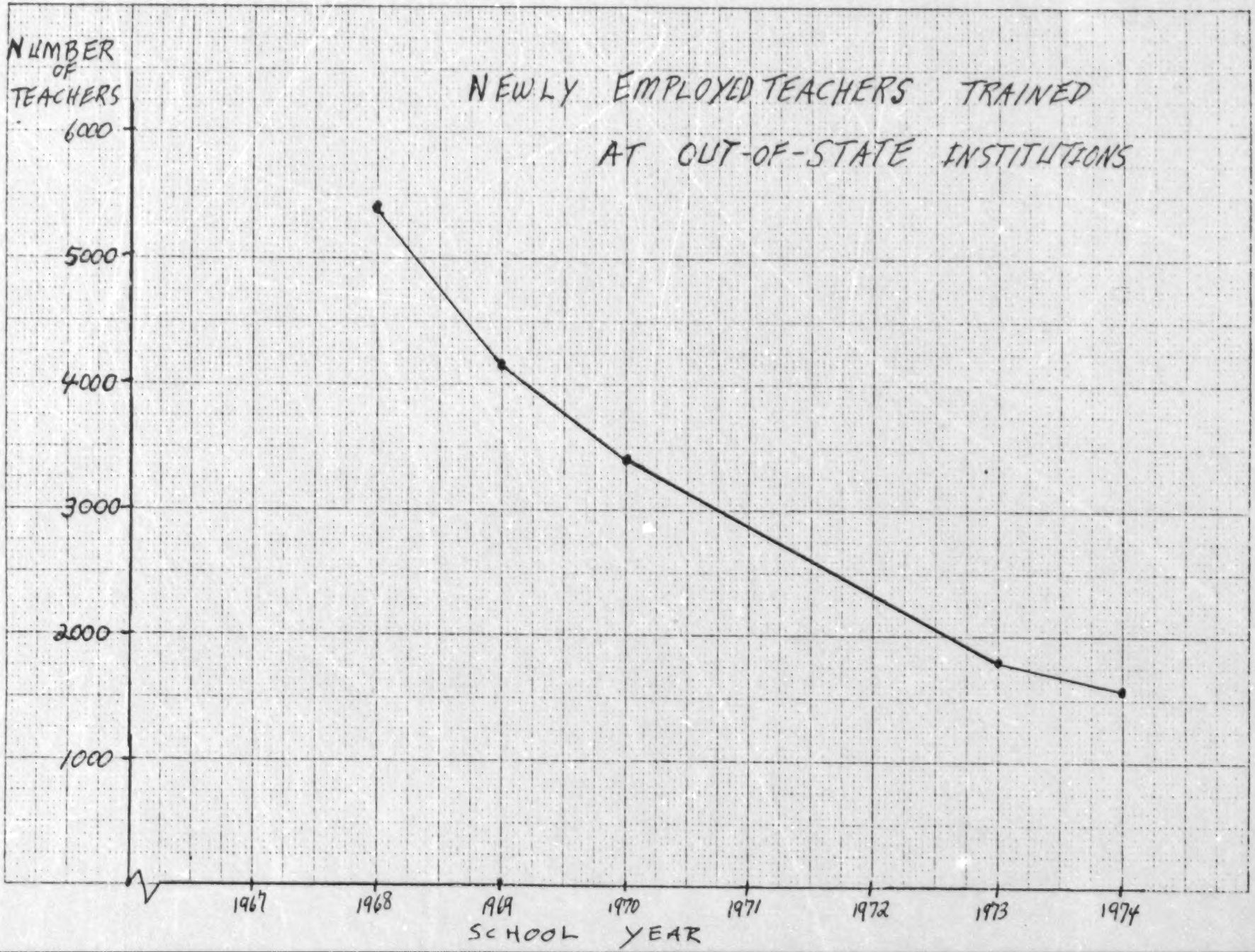
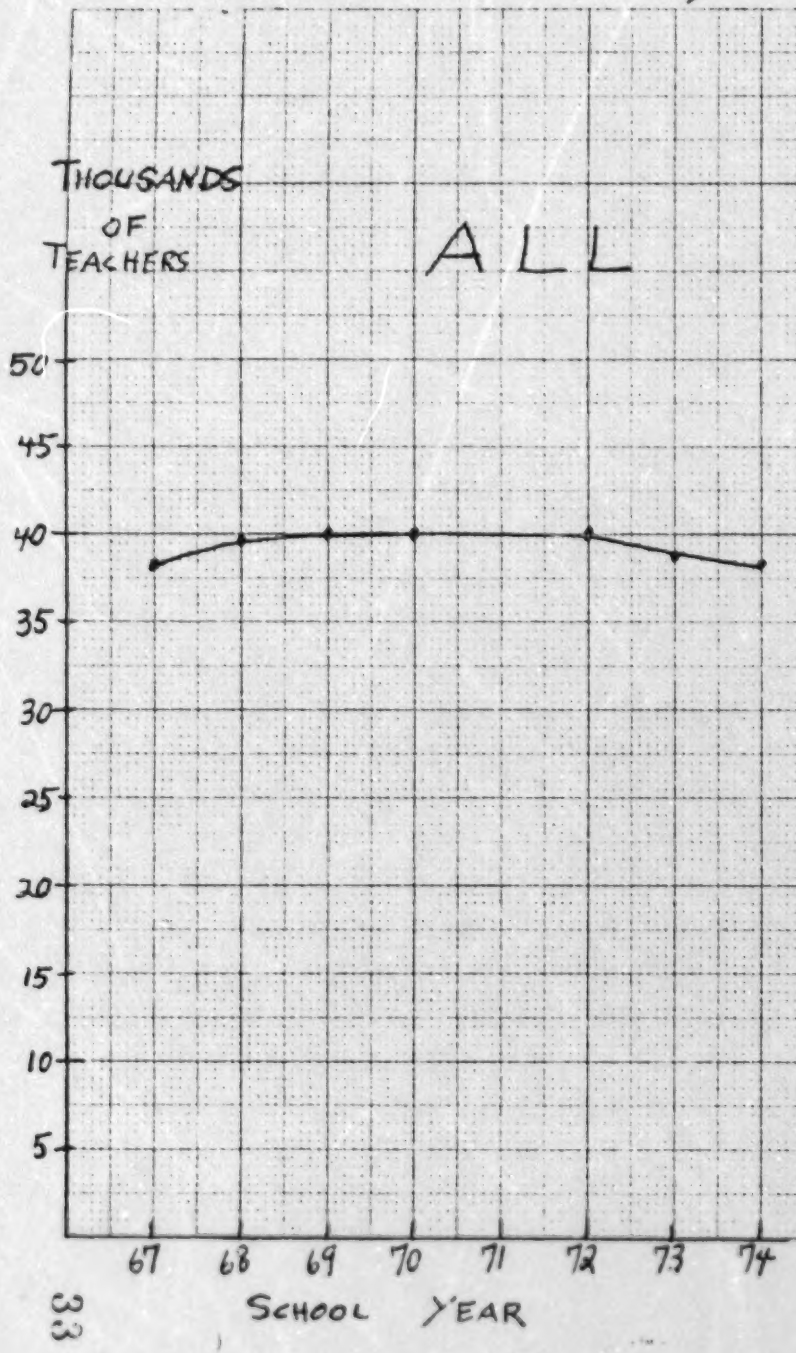

NUMBER OF TEACHERS
6000
5000
4000
3000
2000
1000
NEWLY EMPLOYED TEACHERS TRAINED
AT OUT-OF-STATE INSTITUTIONS
1967
1968
1969
1970
1971
1972
1973
1974
SCHOOL YEAR

FIGURE 10 ELEMENTARY

TRENDS IN EMPLOYMENT OF ELEMENTARY SCHOOL TEACHERS IN MICHIGAN AND TRI-COUNTY AREA



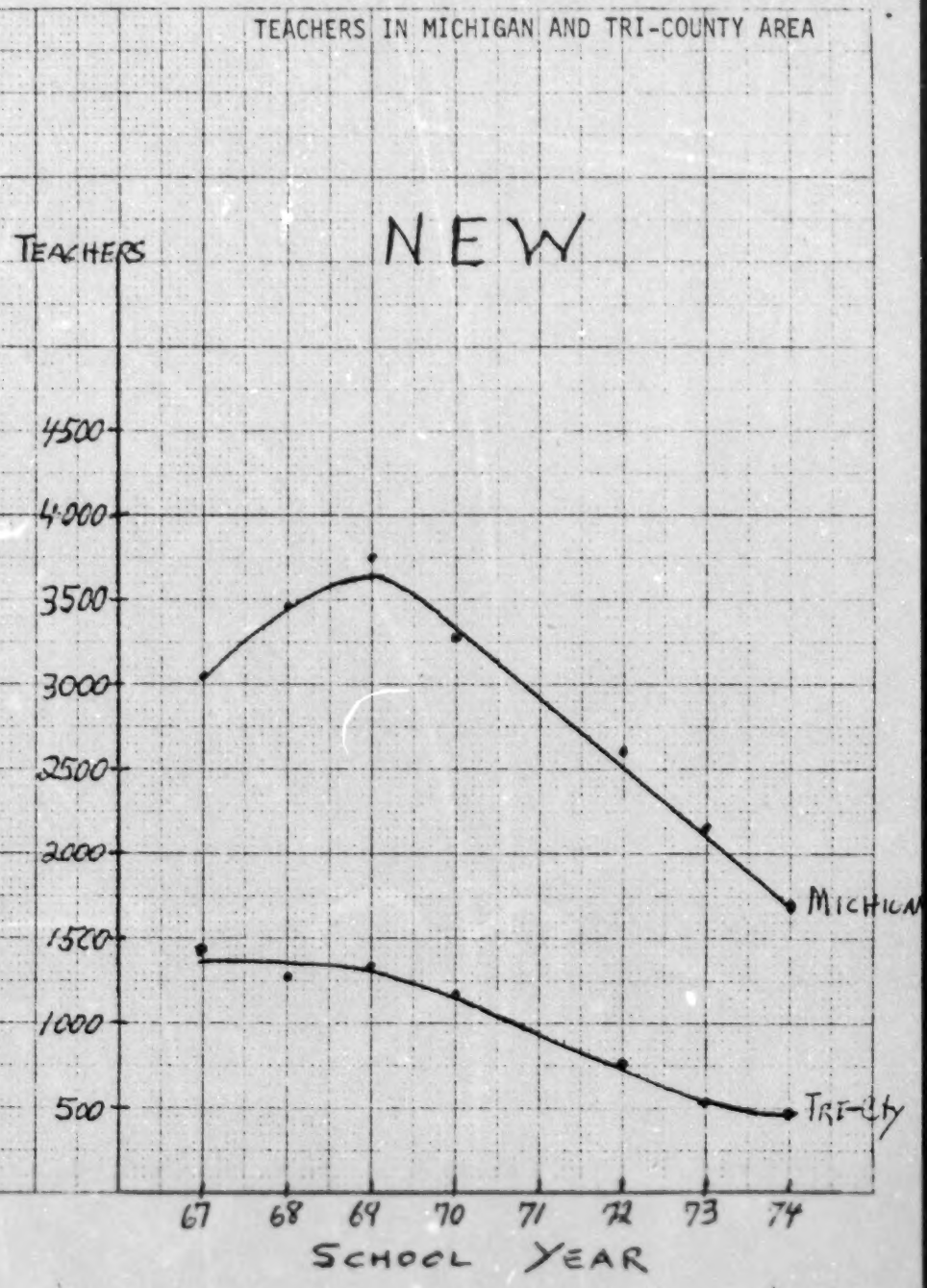
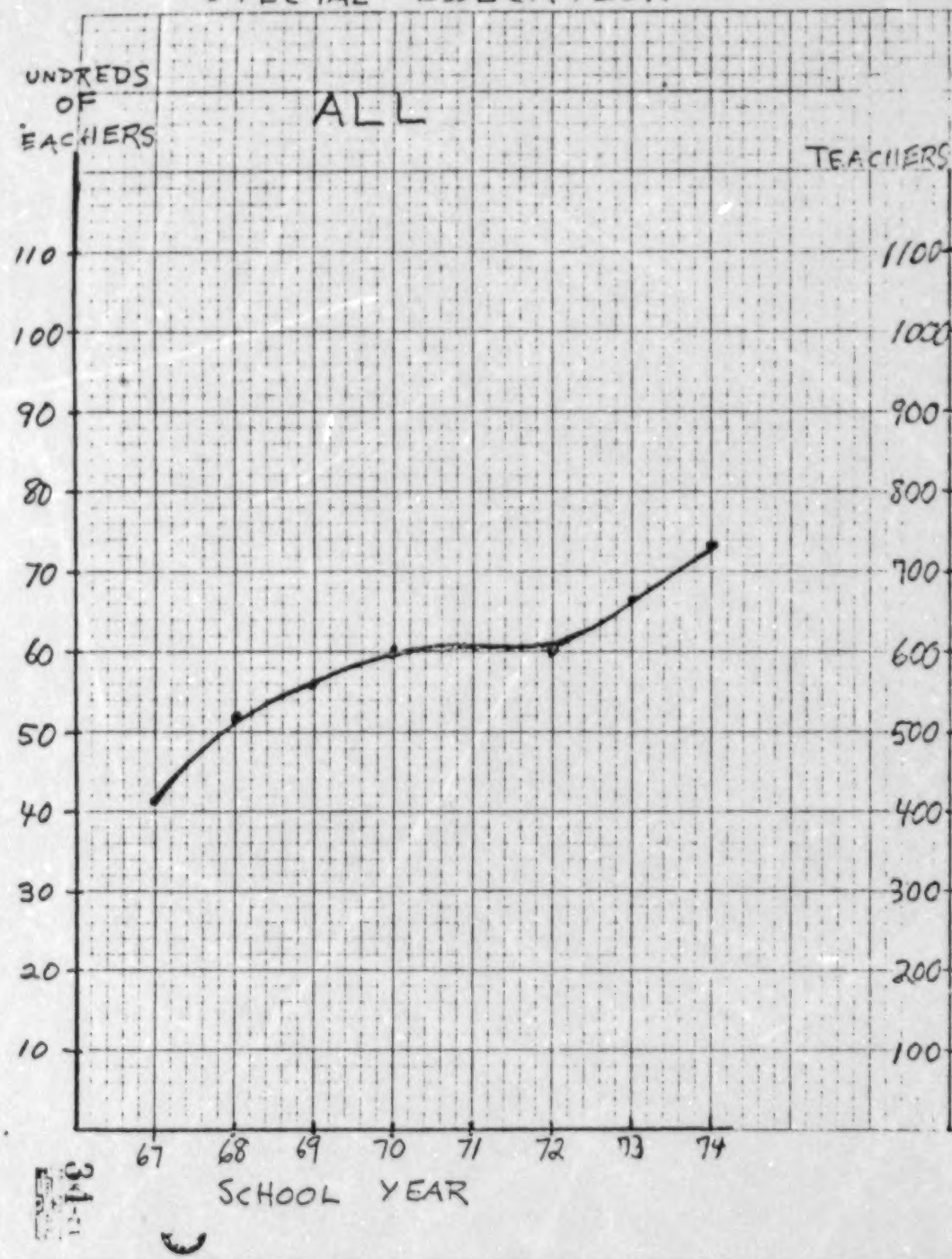


FIGURE 11

SPECIAL EDUCATION

TRENDS IN EMPLOYMENT OF SPECIAL EDUCATION TEACHERS IN MICHIGAN AND TRI-COUNTY AREA



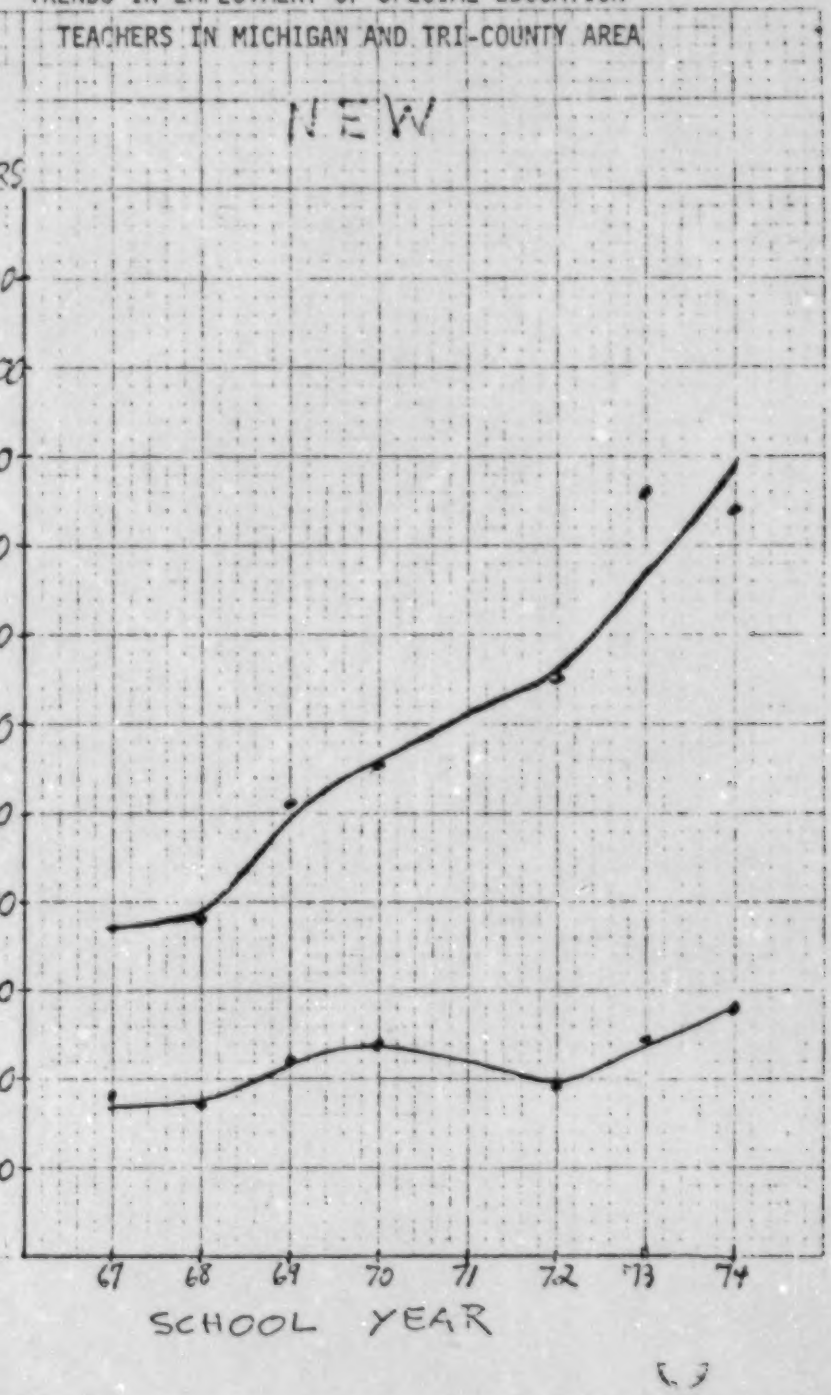


TABLE 4

TEACHER PLACEMENT OPPORTUNITIES IN MICHIGAN

(1974 - 1975)[1]

Field of Preparation	*Need in Metropolitan Detroit
Elementary	
K-6 (Women)	Surplus
K-6 (Men)	Shortage
English & Social Studies Majors	Surplus
Math & Science Majors	Shortage
Reading	Shortage
Special Education	
Mentally Retarded	Surplus
Orthopedic, Deaf, Visually Handicapped	Adequate
Speech Therapy	Adequate
Emotionally Distrubed	Shortage
Learning Disabilities	Shortage
Secondary	
Art (K-12)	Adequate
Business, Distributive Ed.	Shortage
English	Surplus
Speech & Drama	Adequate

TABLE 4 (Cont.)

SECONDARY (CONT.)	
READING, JOURNALISM	SHORTAGE
FOREIGN LANGUAGES	ADEQUATE
HOME ECONOMICS	ADEQUATE
INDUSTRIAL ARTS/VOC. CERT.	SHORTAGE
LIBRARY SCIENCE - CERTIFIED	SHORTAGE
NON CERTIFIED	SURPLUS
MATHEMATICS	SHORTAGE
MUSIC (K-12) INSTRUMENTAL	ADEQUATE
VOCAL	SHORTAGE
PHYSICAL ED. (K-12) MEN	SURPLUS
WOMEN	ADEQUATE
SCIENCE	SHORTAGE
SOCIAL STUDIES	SURPLUS PLUS

*FACTORS INFLUENCING TEACHER MARKET:

1. DECREASE IN BIRTH RATE (1960: 25 BIRTHS/100; 1972: 15 BIRTHS/1000
2. INABILITY TO MOVE OUTSIDE OF TRI-COUNTY AREA
3. BUDGET CUTBACKS - INCREASED CLASSROOM SIZE

[1]Chester A. McCormick, "Analysis of Elementary and Secondary Teacher Placement," 1975.

FIGURE 12

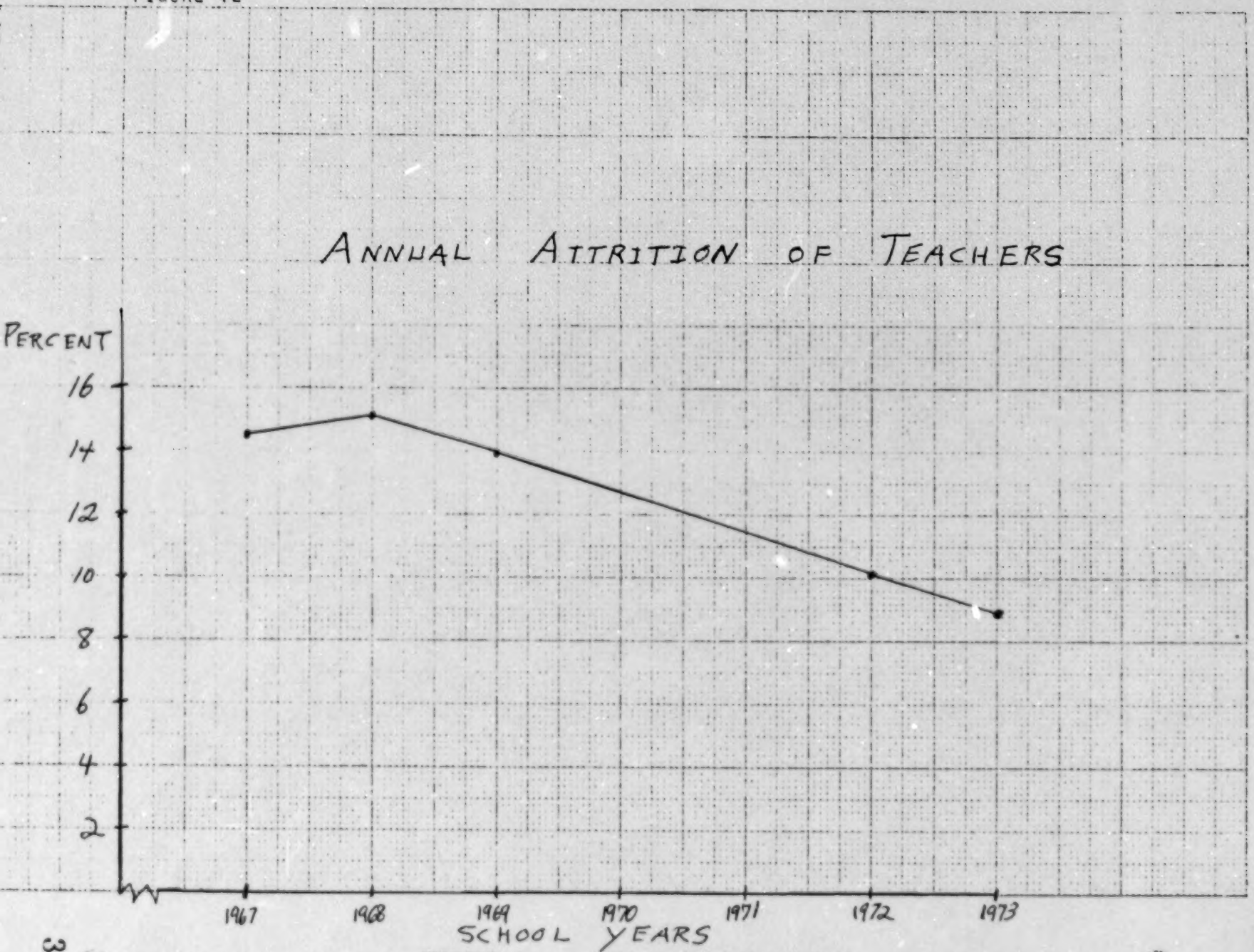
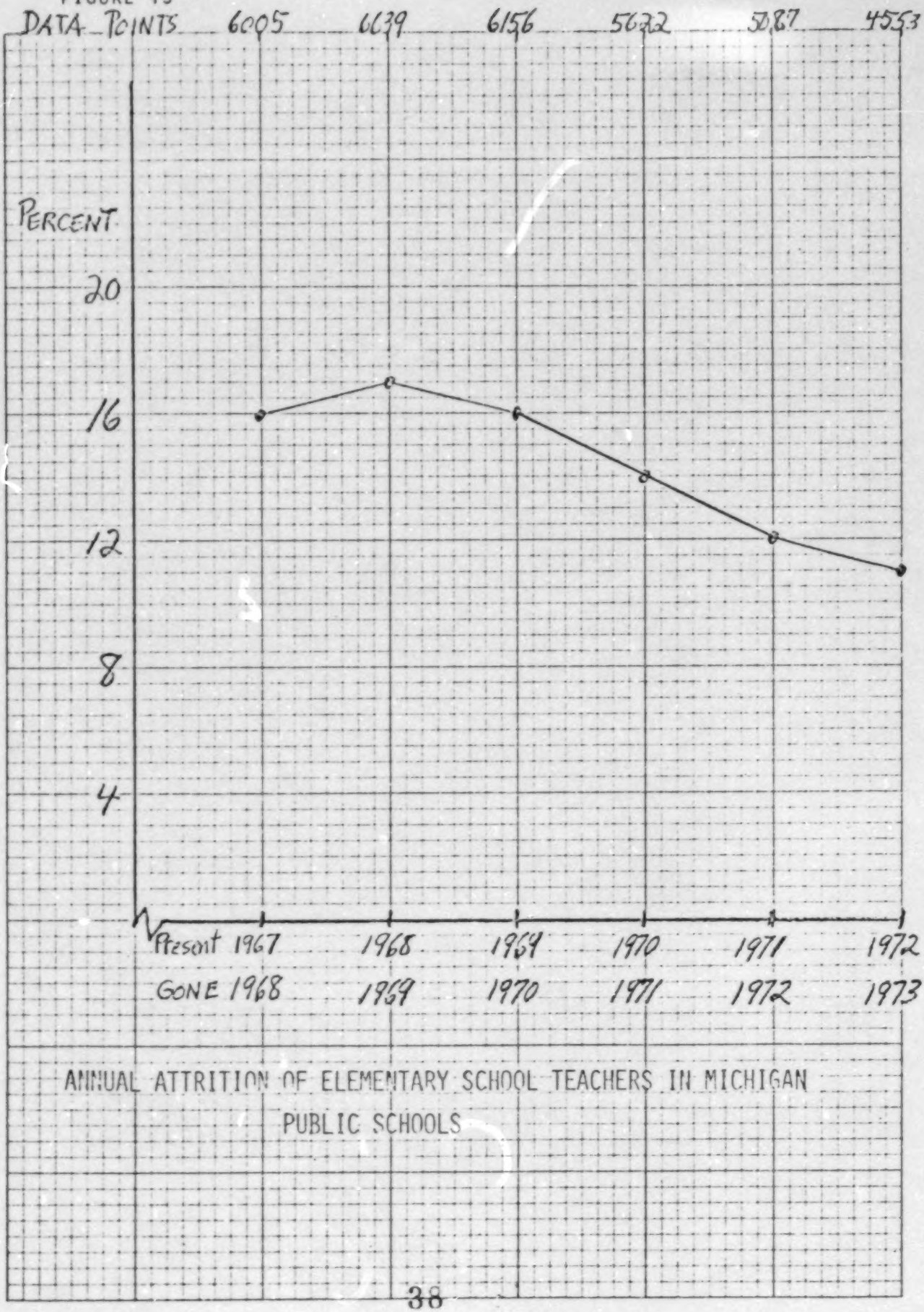
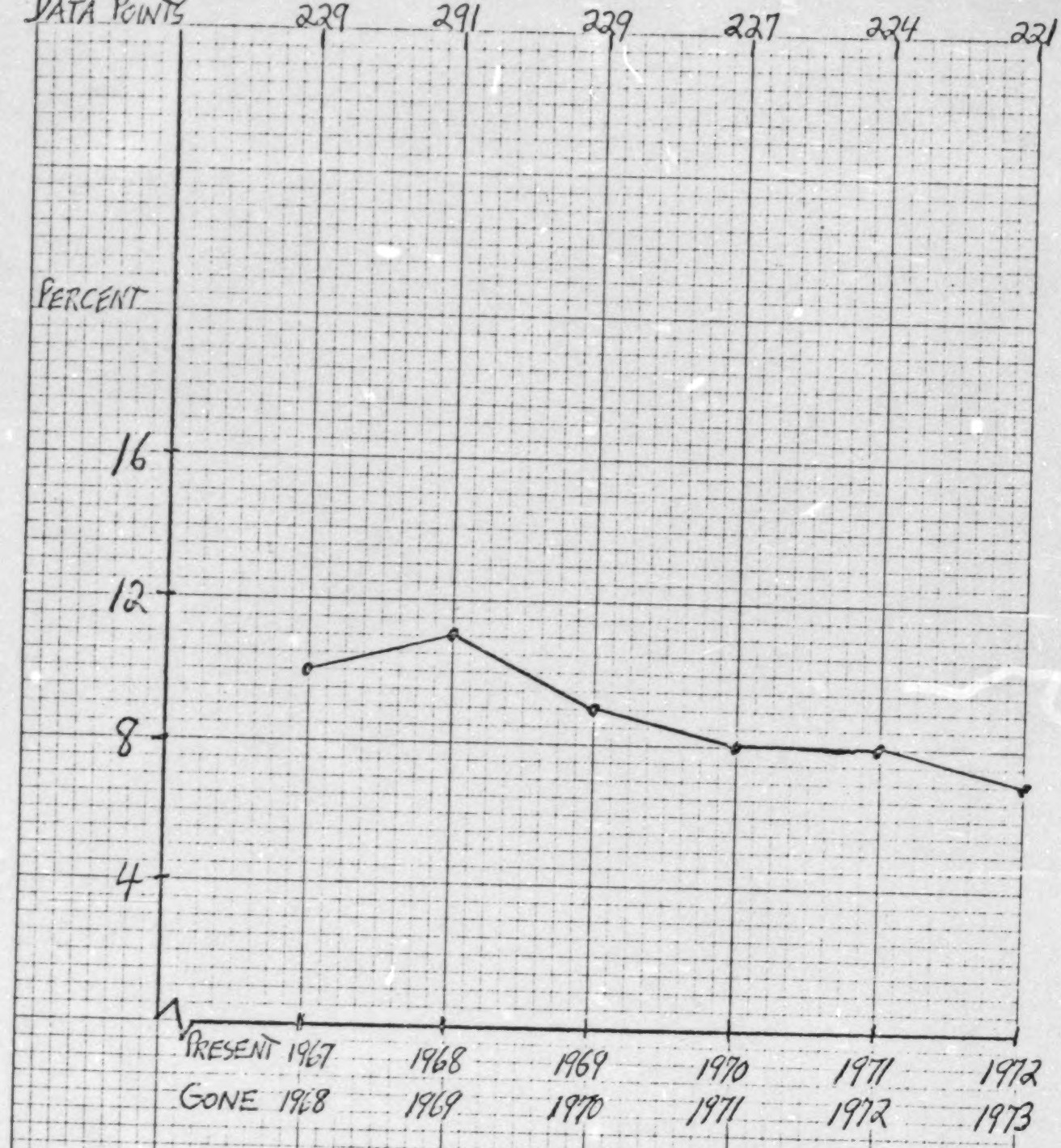

ANNUAL ATTRITION OF TEACHERS
PERCENT
16
14
12
10
8
6
4
2
1967
1968
1969
1970
1971
1972
1973
SCHOOL YEARS

FIGURE 13



ANNUAL ATTRITION OF ELEMENTARY SCHOOL TEACHERS IN MICHIGAN PUBLIC SCHOOLS

FIGURE 14



ANNUAL ATTRITION OF INDUSTRIAL ARTS TEACHERS IN MICHIGAN PUBLIC SCHOOLS

TABLE 5

COMPARISON OF NEW TEACHERS EMPLOYED IN MICHIGAN IN 1973-74
AND NUMBER NEEDED ACCORDING TO MEA FORECAST

Curriculum Area	Number Needed (MEA)	Number Actually Employed	Difference
Art	123	237	-95%
Business	186	176	+5%
Elementary	3335	2164	+33%
Foreign Lang.	330	118	+64%
Health & Phys. Ed.	148	349	136%
Home Economics	138	148	-7%
Industrial Arts	215	240	-12%
Language Arts	772	582	+25%
Mathematics	243	342	-41%
Music	95	285	-200%
Science	230	263	-14%
Social Science	302	301	0%